



ADVANCED CIRCUITRY

P. O. Box 2847, Commercial Station, Springfield, Mo. 65803 417 862-0751

April 13, 1982

RECEIVED

APR 15 1982

Mr. John J. Franke
Regional Administrator
U.S. Environmental Protection Agency
Region VII
324 E. 11th
Kansas City, Missouri 64106

CONSTRUCTION GRANTS BRANCH
WATER DIVISION

Dear Mr. Franke:

Please find enclosed our revised closure plan which was originally submitted on March 17, 1982 for closure of our surface impoundment in Springfield, Missouri. This revised plan reflects the necessary steps taken to meet the requirements set forth in the March, 1982 Eminent Hazard Status issued to Advanced Circuitry by the Missouri Department of Natural Resources. It is also felt that our closure plan meets the requirements contained in the July 1, 1981 40 Code of Regulations Part 265, Subpart G, Closure and Post Closure.

In your letter of April 7, 1982, you stated several questions which I will now try to address.

- 1) A general description of our surface impoundment is as follows: Earthen construction 450' long by 450' wide by an average depth of 9½' which holds a volume of approximately 12 million gallons of waste water. At this time, our lagoon is holding approximately 8½ million gallons of water with the remaining 3½ million gallons already being pumped into the Springfield Sewer System or irrigated.
- 2) Please find enclosed a schematic showing our various treatments of plant effluent prior to discharge to 1) city sewer or 2) filter press for sludge removal.
- 3) At this time, our plan for groundwater monitoring is still pending approval by the Missouri Department of Natural Resources.

I would like to point out once again that by our present schedule of closure, the groundwater monitoring system would only be used for approximately 120 days maximum before its use is terminated.

- 4) We currently have hired the consulting firm of Hood-Rich of Springfield, Missouri to oversee our closure operation. It will be this firm who will certify that our closure was completed



R00337301
RCRA RECORDS CENTER

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in accordance with our approved closure plan. Currently Hood-Rich is estimating an on-site inspection on a bi-weekly basis.

If you have any questions regarding our closure plan, please contact me at your convenience.

Sincerely yours,

David Edwards
David Edwards
Facilities Manager

cc: Paul Meiburger
Environmental Engineer I
Missouri Dept. of Natural Resources
P.O. Box 1368
Jefferson City, Missouri 65102

ROUTING AND TRANSMITTAL SLIP

Date

TO: (Name, office symbol, room number, building, Agency/Post)

Initials Date

1. *Lynn Steinert*

2. *ALH M*

3.

4.

5.

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

ATM/SWMG

APR 19 1982

ion VII K.C., MO

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)

Room No.—Bldg.

Ralph T. Dourney

Phone No. *0834*

5041-102

OPTIONAL FORM 41 (Rev. 7-76)

☆ U.S. G.P.O. 1980-311-156/10

Prescribed by GSA
FPMR (41 CFR) 101-11.206

Subpart G - Closure and Post Closure

265.111 Closure and Post Closure

- A. Owner shall close facility in a manner to minimize all hazards.

265.112 Closure Plan

- A. In March, 1982, the city sewer system was available for hookup and Litton began its use for effluent discharge. At that time, Litton discontinued discharging effluent waters to A pond. Due to the DNR Eminent Hazardous Action of March, 1982, it is expected that the waste water in A pond may be removed by May 1, 1982. At this time, we will begin closure on approximately May 10, 1982.
- B. Based on calculations, approximately 1800 cubic yards of sludge will have accumulated and will be removed to a hazardous waste site. A plan submitted by the contractor, O.H. Materials Company, has been submitted and is included in this report.
- C. Decontamination of equipment will include wash-down within the pond itself.
- D. Actual closure will start in May, 1982, and will take approximately 2 months of excavation and loading time. Final closure will consist of grading over and seeding of the site.

265.113 Time Allowed for Closure

- A. Closure is to take place within 180 days of last receipt of wastes.
- B. We may apply to Regional Administrator for longer closure time.

265.114 Disposal or Decontamination of Equipment

- A. All the equipment and structures used in the closure shall be properly disposed of or decontaminated by high pressure water spray.

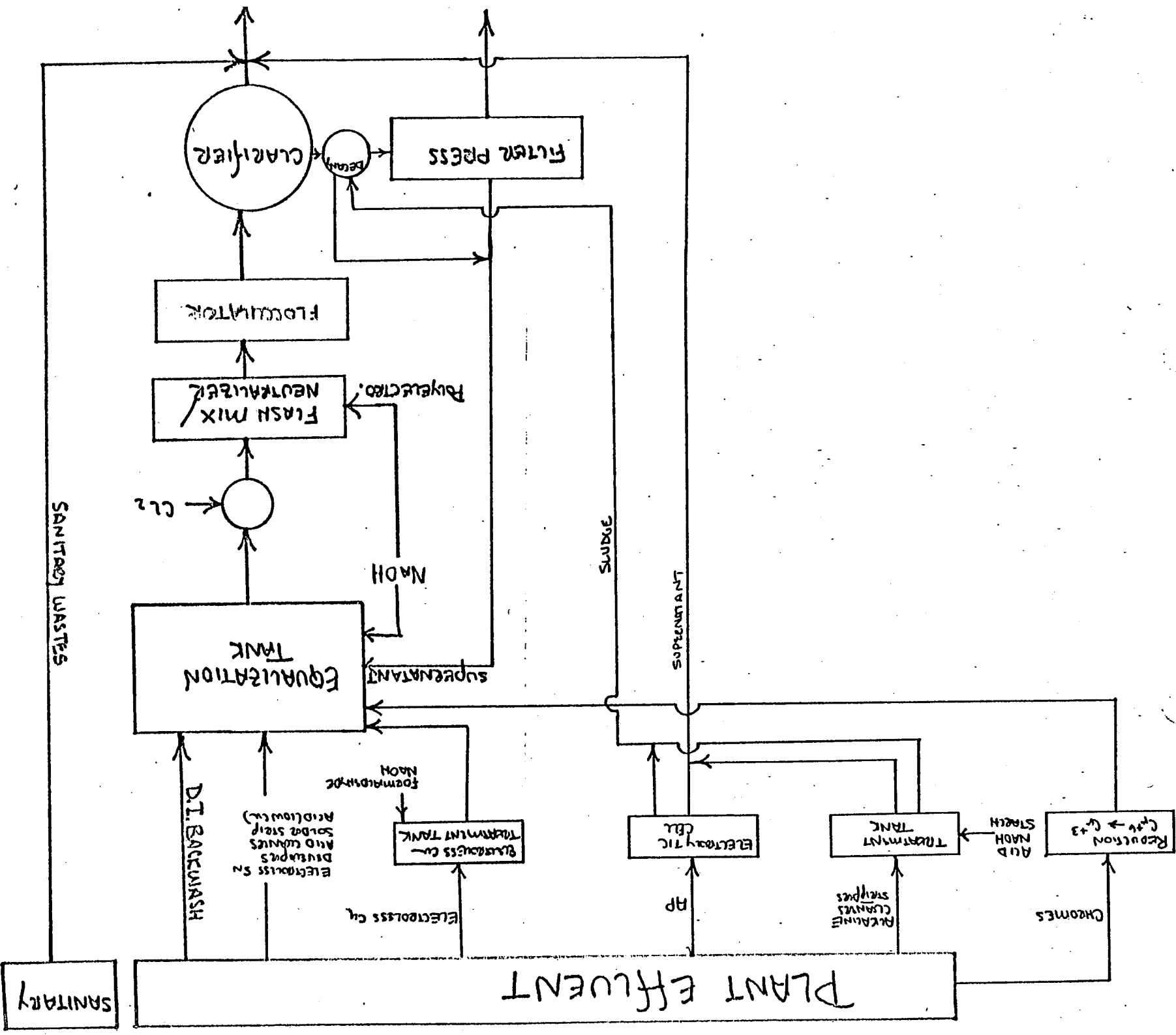
265.115 Certification of Closure

- A. Upon closure, Litton shall submit to the Regional Director certification thereof signed by the operator and an independent professional registered engineer.
- B. Expected certification date is August, 1982.

Subpart H - Financial Requirements

265.112 Cost Estimate for Facility Closure

- A. Litton has developed closure costs for facilities for \$465,000 per contract.

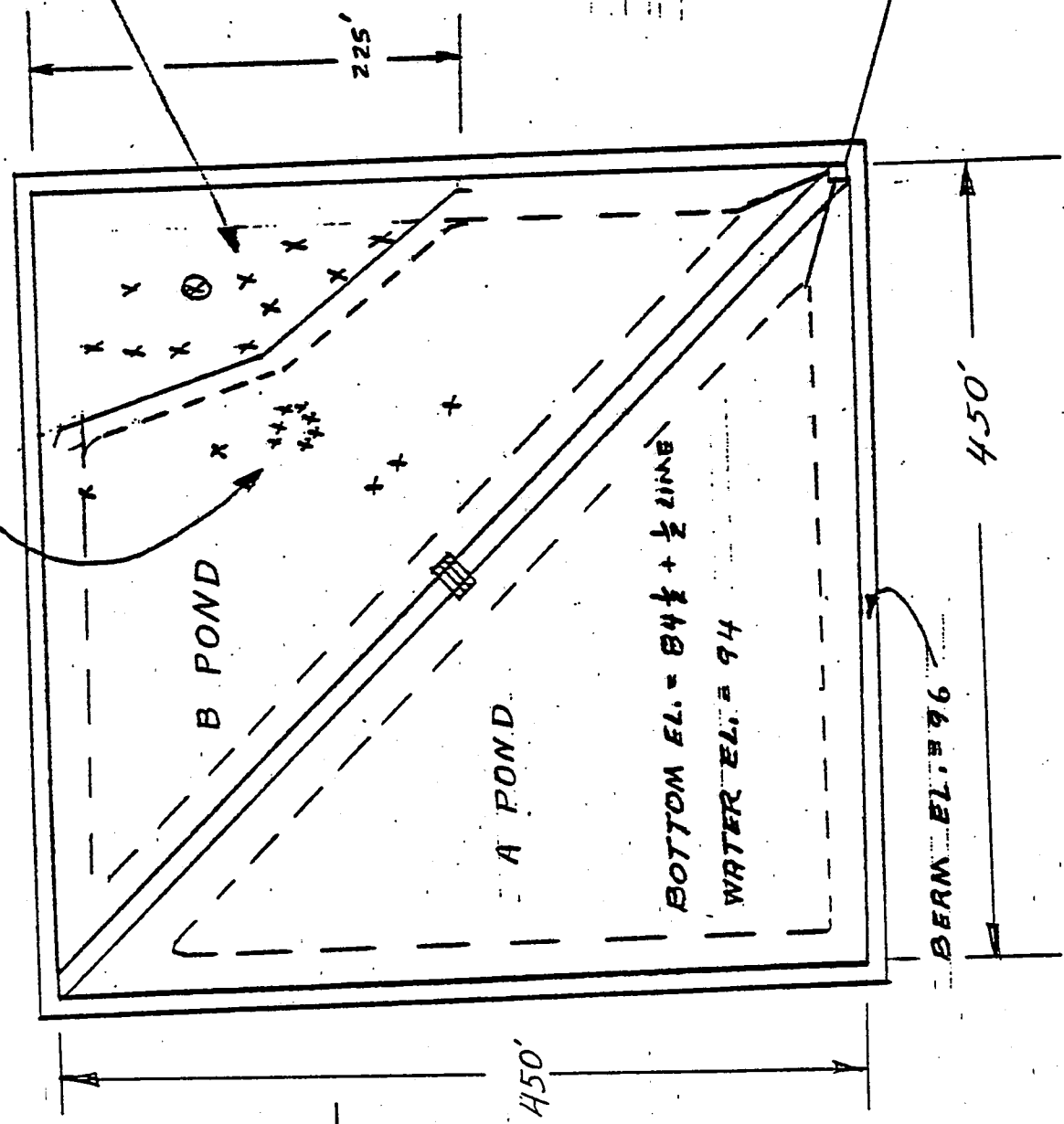


REMOVE PINACLE TOP AND LEVEL TO APPROX. 87' ± + ½ LIME HERE

REMOVE ROCK TO EL. = 83½ HERE
LEVEL TO DESIGN GRADE

REDUCTION OF FULL-DEPTH AREA = APPROX. 0.4 ACR SUBJECT TO ACTUAL AM OF ROCK REMOVED

NOTE: TOTAL VOLUME OF LIQUID ≈ 12 X 10⁶ GALLONS
3/82 DE



O. H. Materials Co.

Emergency Response and Environmental Restoration

Regional Offices
Ottawa, Illinois
Atlanta, Georgia
Washington, D.C.

P.O. Box 551
Findlay, Ohio 45840
Telephone (419) 423-3526
1-800-537-9540

File
HAZARDOUS
WASTE
MANAGE

January 26, 1982

Mr. George Copeland
Facilities Manager
Litton Advanced Circuitry
4811 West Kearney
Springfield, MO 65803

Dear Mr. Copeland:

For this project, we recommend using our Sharples P 5000 Horizontal Super-D Canter as the most cost-effective method of disposing of the pond's sludge contents.

Laboratory tests on samples provided by Litton indicated that the original material containing 10% solids (1 part solid - 9 parts water) could be readily centrifuged. Centrifugation resulted in products containing 50% solids (1 part solid - 1 part water) and a clear supernatant liquid (8 parts water).

Based on past experience, this 50% solid material plus 25% fly ash, or lime, should easily meet landfill requirements for a solid material.

Based on your estimate of 1800 cubic yards, we would pump sludge from the bottom of the lagoon at 80 gallons per minute. We would operate 12 hours per day, with the centrifuge on line 10 hours per day, and complete the pond pump out in about 12 days.

Assuming no further treatment of the supernatant liquid is called for, the liquid would be sent to sewer. The solids would be mixed with 25% fly ash, by weight, (or lime) and loaded into a lined and sealed truck, provided by others, for transportation to the disposal site. All of the above would be done by personnel wearing suitable protective equipment.

This project would take an additional five days for mobilization set up, decontamination, and demobilization, of equipment.

O. H. Materials Co.

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1-800-537-9540

April 5, 1982

Mr. George Copeland
Litton Industries
4811 W. Kearney
Springfield, MO 65803

Dear Mr. Copeland:

In response to your questions, OHM is pleased to provide the following information to describe the normal steps for centrifugation and disposal of waste:

1.0 Characterization and Treatment of Waste

- 1.1 Determine applicability of centrifuge to concentrate waste (laboratory and pilot plant testing).
- 1.2 Contact landfills to determine acceptable form of waste for disposal (percentage of moisture limits, etc.)
- 1.3 Assess water quality discharge criteria and determine disposition of liquid waste.
- 1.3.1 Design additional water treatment, if required.

2.0 Site Assessment

- 2.1 Survey available work areas and plan equipment locations and traffic flow.
- 2.2 Determine most cost effective power supply.
- 2.3 Plan for secure holding of concentrated waste prior to disposal.
- 2.4 Finalize treatment and disposition of centrifuge water.
- 2.4.1 Determine analytical and sampling requirements.
- 2.5 Finalize methods of extracting sludge from lagoon (or other) to centrifuge.
- 2.6 Survey available services and/or equipment from customer and interface.

3.0 Mobilization and Setup

- 3.1 Mobilize equipment to customer's site.
- 3.2 Set up equipment according to previous planning. The following process steps outlined in Figure 1 are included as required.

- 3.3 Set up waste holding areas, if needed.
- 3.4 Finalize disposal arrangements.
- 3.5 Set up analytical and sampling programs

4.0 Operation

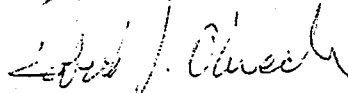
- 4.1 After optimizing all process steps, start continuous operation.
- 4.2 Solid waste to be removed from site as soon as possible to minimize storage.
- 4.3 Sample and analyze water from centrifuge as required.
- 4.4 Final scraping of lagoon with equipment as required.

5.0 Teardown and Cleanup

- 5.1 Remove equipment from customer's site.
- 5.2 Restore site as required.

Please contact me or John Copus if additional information is needed.

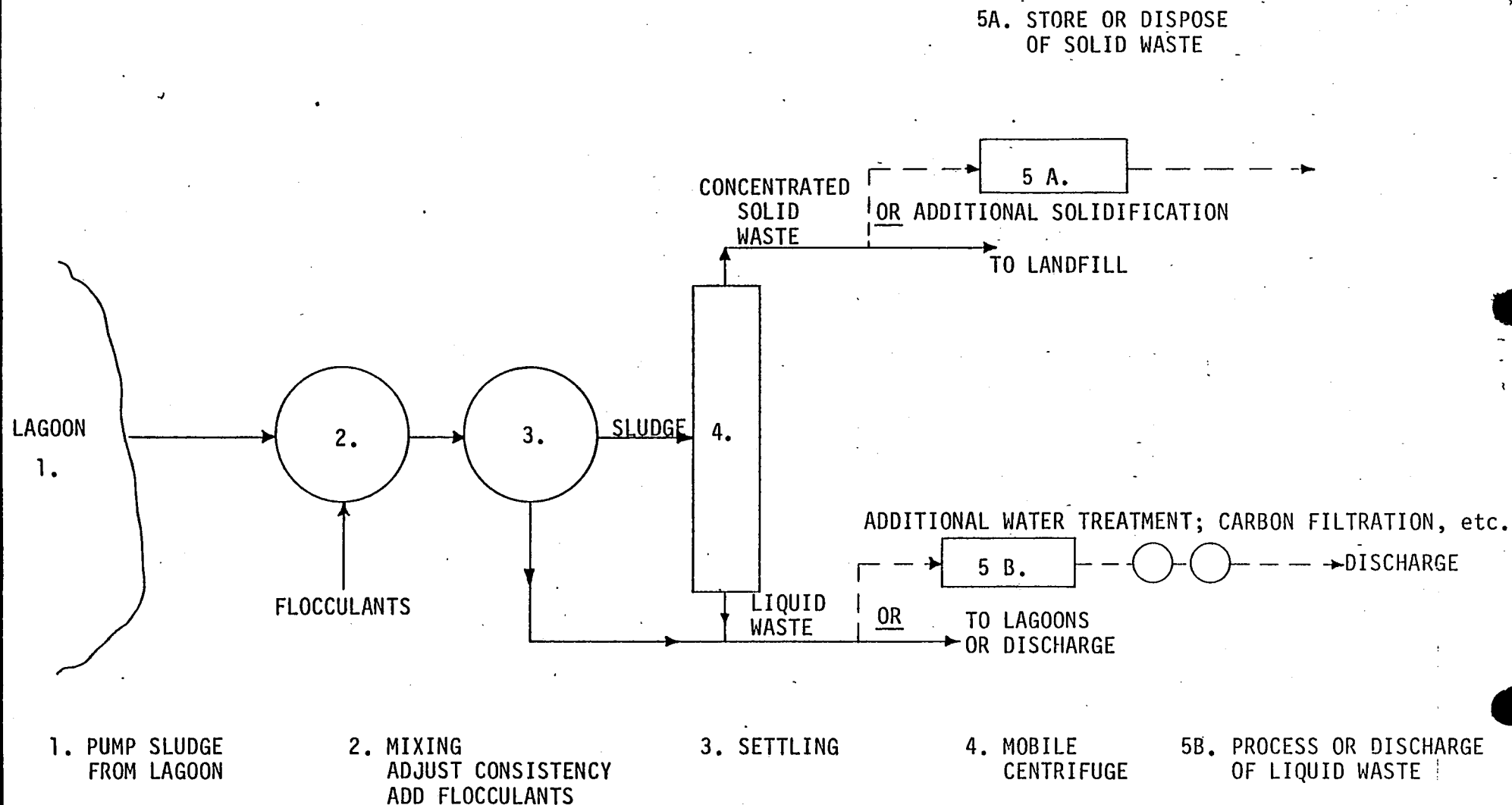
Very truly yours,



Robert J. Ohneck
Director, Project Engineering

RJO:sg

cc: #100.261



SCALE NONE	DRAWING MHB	NO.	DATE	REVISION	BY	PROCESS FLOW SCHEMATIC MOBILE CENTRIFUGATION	O. H. MATERIALS CO. EMERGENCY RESPONSE AND ENVIRONMENTAL RESTORATION BOX 551 FINDLAY, OHIO 418-423-3526 800/537-9540
DATE 4-05-82	CHECKED						
SHEET ___ OF ___	APPROVED 140						
PROJECT DRAWING REVISION							